

REMARKS

Applicants acknowledge with appreciation the Examiner's indication that claims 33-52 and 72-80 are allowed and that claims 8, 10, 18-20, 23-32, 54-61, 63, and 65-71 would be allowable if amended into independent form.

Objection to the Drawings and Specification

The drawings and specification were objected to for failing to show and provide antecedent basis for the shock absorbers set forth in claims 10, 19, 20, 30, 31, 33-37, 39, and 40. Applicant respectfully directs the Examiner to page 15, lines 6-16 reproduced below.

“As the actuator apparatus extends, contact surfaces 330 at distal ends 331 of lower blocks 315 approach and push up on contact surfaces 332 at distal ends 333 of upper blocks 317 in a manner similar to lower and upper blocks 215, 217. When lower blocks 315 contact upper blocks 317, contact surfaces 330 of arms 322 push on contact surfaces 332 of arms 324 while bodies 318, 320 remain spaced apart as shown in Fig. 20. The contact causes arms 322, 324 to flex slightly to absorb the impact to provide a spring or **shock absorber** between the telescoping members during raising of the table top. According to the presently preferred embodiment, lower and upper blocks 315, 317 are made of steel. According to alternative embodiments of the present disclosure, the blocks are made of other materials such as other metals or plastics.”
(emphasis added).

The Examiner is also respectfully directed to Figs. 19 and 20 which show the shock absorbers described in the above quoted paragraph. In that the specification has been shown to provide antecedent basis for the claims and in that the drawings have been shown to show shock absorbers, the applicant respectfully requests removal of the rejection to the specification and drawings.

Objection to the Claims

Claim 55 was objected to for depending from itself. Claim 55 has been amended to depend from claim 54. The Examiner will notice that the dependency from claim 54 is necessary for claim 55 to have proper antecedent basis. This amendment is performed simply to correct a typographical error. Such an amendment is not a limiting amendment and is not an amendment related to patentability. Removal of the objection is respectfully requested.

Prior Art Rejections

A. U.S. Patent No. 4,589,642

Claims 1-7, 11, 53, 62, and 64 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,589,642 to Schnelle et al. (hereinafter “Schnelle”.) Schnelle discloses an operating table including a hydraulic lifting apparatus 18. The lifting apparatus 18 includes two antiparallel lifting cylinders 26, 28 arranged next to one another, connected in parallel with one another, and having similar cross sections. The piston rod 30 of one cylinder is connected with the column head 16 and the piston rod 32 of the other cylinder is connected with the column foot 14. The pressure fluid supply and exhaust for the lifting apparatus 18 takes place through the piston rod 30 connected with the column head 16.

1. Claim 1

Schnelle fails to teach or suggest “the first piston rod being formed to include a first fluid passage therein ... the second piston rod being formed to include a second fluid passage therein” as recited in claim 1. As shown in Figs. 6 and 7 of Schnelle, piston rod 30 has tube 72 and inner space 66 therein. Tube 72 and space 66 are passages for hydraulic fluid to flow and are each in communication with hydraulic unit 24. Piston rod 32 is of a solid cross section without passages therein. Therefore, Schnelle fails to teach a “second piston rod being formed to include a second fluid passage therein.” Applicants respectfully submit that claim 1 patentably defines the invention over Schnelle and request removal of the rejection.

2. Claims 2-7 and 11

Claims 2-7 and 11 depend either directly or indirectly from claim 1. In that claim 1 is believed to be allowable, claims 2-7 and 11 are also believed to be allowable. Reconsideration of claims 2-7 and 11 with respect to Schnelle is respectfully requested.

3. Claim 53

Schnelle fails to teach or suggest “a fluid system coupled to each of the first and second pistons to supply pressurized fluid to the housing” as recited in amended claim 53. While the Applicants believe that Schnelle does not read on the original claim 53, claim 53 has been amended to clarify the previously inherent limitation. Applicants do not believe that the amendment alters the scope of the claim. The claimed fluid system supplies fluid to the housing. Therefore, the claimed fluid system is distinct from the claimed housing. The lifting apparatus 18 of Schnelle has a hydraulic unit 24 coupled to a first piston 30 through pressure fluid connectors 62, 64. Second piston 32 has no fluid connectors and is not coupled

to the hydraulic unit 24. Therefore, Schnelle fails to teach a “fluid system coupled to each of the first and second pistons to supply pressurized fluid to the housing.” Applicants respectfully submit that claim 53 patentably defines the invention over Schnelle and request removal of rejection.

4. Claim 62

Schnelle fails to teach or suggest “the pressurized fluid providing means including a fluid passage in each of the first and second pistons” as recited in amended claim 62. Claim 62 has been amended to more clearly state the limitation that was previously inherent. The clarified limitation states that each of the first and second pistons has a fluid passage therein. As discussed with respect to a similar limitation in claim 1, Schnelle does not teach a second piston having a fluid passage therein. Accordingly, Applicants respectfully submit that claim 62 patentably defines the invention over Schnelle and request removal of rejection.

5. Claim 64

Claim 64 depends from claim 62. In that claim 62 is believed to be allowable, claim 64 is also believed to be allowable. Reconsideration of claim 64 with respect to Schnelle is respectfully requested.

B. U.S. Patent No. 5,624,933

Claim 22 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,624,933 to Knapp et al. (hereinafter “Knapp”). Knapp discloses a lift column 3 for a surgical support. The lift column 3 consists essentially of a bottom support plate 4 fixed to a base 2, an inner housing 5 that is enclosed in a telescoping fashion by an outer housing 6, and a top plate 7. A cylinder housing 11 of a lift cylinder 12 is fixed to bottom support plate 4. A piston rod 13 of lift cylinder 12 acts on the top support plate 7 to selectively adjust the length of the lift column 3. Three lift cylinders 17, 19, 21 are each rigidly connected to the top support plate 7. The piston rods 23, 26, 28 are connected to a swing plate 25 by way of articulations 24, 27, 29. Lift cylinders 12, 17, 19, 21 are actuated by a control means 36 comprising three pairs of electro-magnetically controllable 2/2-way seat valves 37, 38. One control valve 37 and one control valve 38 form a control division 41, 42, or 43 together with an output 44 and 45 in each instance. The lift cylinders 12, 17, 19, 21 are connected by way of hydraulic lines 46, 47 and by way of intermediate lines 48 to the outputs 44 and 45 of the control division 41. At the outputs 44 and 45 of the control divisions 42 and 43, additional hydraulic lines 49 and 50 are fitted. The hydraulic system as well as the control means 36, or the control valves 37 and 38 are accommodated in the interior of the lift column 3, i.e. in the

space enclosed by the housing part 5. By their “exits” the valves 37 and 38 are connected to lines or passages 39 and 40. Both lines 39, 40 lead to a hydraulic system.

“Figs. 8 and 9 show an additional possible embodiment differing from the embodiment of Figs. 1-7 substantially only in that in the upper support plate 7, hydraulic passages 53 are provided, namely for the lift cylinders 17, 19, and 21. [A] valve block 54 of the control valve means 36 is screwed directly to the under side of the support plate 7 so that no connecting hoses are required.”

1. Claim 22

Knapp fails to teach or suggest “the support tubes and the actuator defining an interior region therebetween, and the interior region being devoid of fluid lines,” as required by claim 1. As shown in Fig. 7 the control valve means 36 is coupled, via hydraulic lines 46, 47, 49, 50 to cylinders 12, 17, 19, 21. Control valve means 36 is further coupled to a hydraulic system via lines 39, 40. The specification states that the embodiment of Figs. 8 and 9 only differ from the embodiment of Figs. 1-7 by providing passages 53 for lift cylinders 17, 19, 21 and by providing a valve block 54 to couple the valve means directly to passages 53 to eliminate the hoses that were previously there.

Valve block 54 does not eliminate hoses 46 that run to lift cylinder 12 from control valve means 36. Furthermore, valve block 54 does not eliminate hoses 39, 40 that couple control valve means 36 to the hydraulic system. Fig. 8 does not show control valve means 36. However, the specification states that for Figs. 1-7 “The hydraulic system as well as the control means 36, ... are accommodated in the interior of the lift column 3.” The list of the only substantial differences between Figs 1-7 and Figs. 8-9 does not list the position of the hydraulic system and control means 36 as a difference. Therefore, the specification teaches having the hydraulic system and control means 36 on the interior of lift column 3 of Fig. 8. Therefore, the fluid lines 46 that connect the control means 36 to the lift cylinder 12 and the lines 39, 40 that connect the control means 36 to the hydraulic system (neither of which are replaced by valve block 54) must necessarily be located within the interior of lift column 3 to be able to attach to control means 36.

Furthermore, valve block 54 can be seen in Fig. 8 to have ports or openings that open to the area between the cylinders 12, 17, 19, 21 and the guide rails 56, 57, 58 (the openings on the left, right, and lower side of valve block 54). Likewise, cylinders 12, 17, and 19 appear to have circular connection ports near their lower ends. The openings in valve block 54 and ports in cylinders 12, 17, 19 need to connect to some structure to allow the supply and transport of the hydraulic fluid thereto. Such structure would be fluid lines.

Accordingly, Knapp fails to teach or suggest “the support tubes and the actuator defining an interior region therebetween, and the interior region being devoid of fluid lines,” as required by claim 1. Applicants respectfully submit that claim 22 patentably defines the invention over Knapp. Reconsideration of claim 22 is requested.

C. Schnelle and Knapp

Claims 9, 12-17, 21, and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schnelle in view of Knapp.

1. Claim 9

Claim 9 depends from claim 1. In that claim 1 is believed to be allowable, claim 9 is also believed to be allowable. Reconsideration of claim 9 with respect to Schnelle is respectfully requested.

2. Claim 12

The combination of Schnelle and Knapp fails to teach or suggest “the actuator including a plurality of pistons, each piston having at least one fluid line positioned therein,” as required by amended claim 12. Claim 12 was amended to make explicit the previously inherent limitation that each piston have at least one fluid line therein. As discussed with respect to a similar limitation of claim 1, Schnelle does not teach two pistons having fluid lines therein. Knapp does not disclose the cross section or inner workings of their pistons. Therefore, the combination of Schnelle and Knapp can not be read to teach “the actuator including a plurality of pistons, each piston having at least one fluid line positioned therein.” Reconsideration of claim 12 is respectfully requested.

3. Claims 13-17 and 21

Claims 13-17 and 21 depend from claim 12. In that claim 12 is believed to be allowable, claims 13-17 and 21 are also believed to be allowable. Reconsideration of claims 13-17 and 21 with respect to Schnelle is respectfully requested.

4. Claim 22

The Examiner has proposed to place the guide rails 56, 57, 58 of Knapp around the lift column of Schnelle to arrive at the claimed invention. First, placing the lift column of Schnelle within the guide rails 56, 57, 58 fails to satisfy the limitation of “the interior region being devoid of fluid lines.” Fig. 2 of Schnelle shows pressure fluid conductor 118. Placing the lift column of Schnelle within the guide rails 56, 57, 58 of Knapp would place fluid conductor 118 within the interior region. Therefore, the proposed combination does not satisfy all the limitations of claim 22.

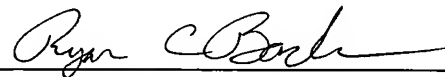
Second, the Examiner has stated that the proposed motivation for combining the references is that Schnelle uses an exposed lift column that would be potentially dangerous. Therefore, the Examiner proposes that it would be obvious to apply the guide rails 56, 57, and 58 to alleviate this danger. The Applicant notes that guide plates 56, 57, 58 as shown in Fig. 9 have many openings that would decrease in size as the overall column length decreased. Such reduction in gap space of the many openings provides many exposed surfaces and gaps that are much more likely to allow clothing or body parts to be caught therein than does the column of Schnelle alone. Therefore, the Examiner's proposed combination does not achieve the goals of the proposed motivation for making the combination, but rather exacerbates the proposed problem. Accordingly, the proposed combination does not satisfy all the limitations of claim 22 and the proposed motivation to combine is improper. The Applicant respectfully requests reconsideration of claim 22 with respect to Schnelle and Knapp.

Final Comments

It is respectfully requested that the Examiner issue a Notice of Allowance in due course. If necessary, the Examiner is asked to call Applicants' attorney to address any outstanding issues to expedite the prosecution of this application for all parties.

If necessary, Applicants request that this Response be considered a request for an extension of time for a time appropriate for the response to be timely filed. Applicants request that any required fees needed beyond those submitted with this Response be charged to the account of Bose McKinney & Evans, Deposit Account Number 02-3223.

Respectfully submitted,



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